

**We claim:**

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1. A method for targeting degradation of a polypeptide in vivo comprising:  
providing a ubiquitin protein ligase polypeptide that encodes a ubiquitin conjugation activity, which is functionally linked to a target polypeptide interaction domain that provides a target polypeptide recruitment activity;  
expressing said ubiquitin protein ligase polypeptide-target polypeptide interaction domain hybrid in a cell;  
recruiting the target polypeptide to said ubiquitin protein ligase polypeptide; and  
ubiquitinating the target polypeptide,  
thereby forming a ubiquitin-target polypeptide conjugate which is targeted for degradation.
2. The method of claim 1, wherein the ubiquitin-target polypeptide conjugate further undergoes ubiquitin-dependent proteolysis.
3. The method of claim 2, wherein said ubiquitin-dependent proteolysis is by the proteasome.
4. The method of claim 1 wherein the ubiquitin protein ligase polypeptide is an E3 ubiquitin protein ligase.
5. The method of claim 4, wherein the E3 ubiquitin protein ligase is selected from the group consisting of: an SCF polypeptide, a HECT polypeptide, and a UBR1 polypeptide.
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6. The method of claim 5, wherein the SCF polypeptide is an F-box polypeptide.
7. The method of claim 6, wherein the F-box polypeptide further comprises a WD domain.
8. The method of claim 6, wherein the F-box polypeptide is selected from the group consisting of Cdc4p, Pop1p, Pop 2p, Grr1p, Met30p, HOSp, beta TrCPp, and FWD1p.
9. The method of claim 6, wherein the F-box polypeptide is a polypeptide selected from the group consisting of SEQ ID Nos. 2, 4, 6, 8, 10, and 12.

10. The method of claim 6, wherein the F-box polypeptide is encoded by a nucleic acid selected from the group consisting of SEQ ID Nos. 1, 3, 5, 7, 9, and 11.

11. The method of claim 5, wherein the SCF polypeptide is selected from the group consisting of: a Cdc4 polypeptide, a Skp1 polypeptide or a cullin polypeptide.

12. The method of claim 5, wherein the HECT polypeptide is selected from the group consisting of E6-AP, Nedd-4, RSP5, Smurf1, TOM1 and EDD.

13. The method of claim 5, wherein the E3 ubiquitin protein ligase is a yeast or a mammalian UBR1 polypeptide.

14. The method of claim 1, wherein the target polypeptide interaction domain is selected from the group consisting of a papillomavirus E7 polypeptide, and an SV40 LTP polypeptide.

15. The method of claim 1, wherein the target polypeptide is selected from the group consisting of a retinoblastoma polypeptide, a p107 polypeptide, IκB, Sic1p, Cln2p, E2 or beta-catenin.

✓ 16. A method for decreasing the level of a target polypeptide comprising:  
providing an SCF recruitment domain which is operably linked to a target polypeptide interaction domain to form an SCF recruitment domain-target polypeptide interaction domain fusion protein; and  
expressing the SCF recruitment domain-target polypeptide interaction domain fusion protein such that the level of said target polypeptide is decreased.

17. The method of claim 16, wherein the SCF recruitment domain is an F-box polypeptide.

18. The method of claim 17, wherein the F-box polypeptide further comprises a WD domain.

19. The method of claim 17, wherein the F-box polypeptide is selected from the group consisting of Cdc4p, Grr1p, Pop1p, Pop 2p Met30p, HOSp, betaTrCp, and FWD1.

20. The method of claim 14, wherein the F-box polypeptide is at least 70% to a polypeptide of at least 20 contiguous amino acids of a polypeptide selected from the group consisting of SEQ ID Nos. 2, 4, 6, 8, 10, and 12.

21. The method of claim 17, wherein the F-box polypeptide is encoded by a nucleic acid which hybridizes to a nucleic acid selected from the group consisting of 1, 3, 5, 7, 9, and 11.

22. A method for creating a destabilized polypeptide subject to SCF-mediated proteolysis comprising:  
providing an SCF recruitment domain; and  
operably linking the SCF recruitment domain to the polypeptide, thereby creating the destabilized polypeptide subject to SCF-mediated proteolysis.

23. A method for expressing a destabilized target polypeptide subject to SCF-mediated proteolysis comprising:  
providing an SCF recruitment domain which is operably linked to a target polypeptide and expressing the SCF-target polypeptide fusion, thereby expressing a destabilized target protein.

24. A nucleic acid for expressing an SCF recruitment domain- target polypeptide interaction domain comprising:  
a nucleic acid encoding an SCF recruitment domain; and  
a nucleic acid encoding a heterologous polypeptide domain;  
wherein the nucleic acid encoding the SCF recruitment domain and the nucleic acid encoding the heterologous polypeptide domain are operably linked so as to encode an SCF recruitment domain-heterologous polypeptide domain fusion protein.

25. The nucleic acid of claim 24, wherein the heterologous polypeptide domain is a target polypeptide.

26. The nucleic acid of claim 24, wherein the heterologous polypeptide domain is a target polypeptide interaction domain.

27. The nucleic acid of claim 24, wherein the nucleic acid encoding the SCF recruitment domain is at least 90% identical to a nucleic acid selected from the group consisting of SEQ ID Nos. 1, 3, 5, 7, 9, and 11.

28. The nucleic acid of claim 24, wherein the nucleic acid encoding the SCF recruitment domain hybridizes under stringent conditions to nucleic acid selected from the group consisting of SEQ ID Nos. 1, 3, 5, 7, 9, and 11.

29. A vector comprising a nucleic acid encoding an SCF recruitment domain and a cloning site for inserting an heterologous polypeptide encoding sequence.

30. A vector comprising a nucleic acid of claim 24.

31. A cell comprising a vector of claim 29 or claim 30.

32. A method of treating a cell to stabilize a target polypeptide of ubiquitin protein ligase comprising contacting the cell with a preparation comprising an effective amount of an organic compound which can competitively inhibit interaction of the target polypeptide with the ubiquitin protein ligase.

33. The method of claim 32, wherein the organic compound is a peptide or peptidomimetic.

34. The method of claim 33, wherein the peptide or peptidomimetic is a competitive inhibitor of a WD domain.

35. The method of claim 33, wherein the peptide or peptidomimetic comprises a general chemical formula of G-H-X<sup>(3-6)</sup>-h-X-X-h-X-r-X-t<sup>(2-3)</sup>-p-X-h-h-X-X-X-X-D-X-X-X-X-h-W-D.

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E2(E39A) over time were determined by immunoprecipitation followed by immunoblotting using the anti-EE monoclonal antibody (Babco).

## 6. Polypeptide and Nucleic Acid Compositions

The F-box protein Cdc4p is encoded by a nucleic acid sequence corresponding to nucleotides 7558 to 9897 of GenBank Accession No.D31600 (SEQ ID No. 1) as shown below, and which encodes the F-box protein corresponding to GenBank Accession No. BAA06495 (SEQ ID No. 2) as shown below.

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61	tcttccaatc	cattgaaaaa	tcttactgat	tcttcgacct	cctcctggct	taagtttgtc
121	tcctaatgaa	tatatagcag	ccaaatcaat	atgtttgatc	tatcctttgg	ctcgtatttc
181	gaatagtcca	gtatatcaaa	taatgttggt	gcataagctg	cttttgattc	ttgtttttca
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301	ttcgatttga	cttccacata	cttggaagaa	aacctcttgt	caattaggcc	ggaattatca
361	catatgctaa	acaacatatt	aataatgtta	aatttggttaa	cgggtgtccac	ttcaccatca
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481	tttttcagaa	ttagatttcag	tctaggtgta	tcctgcaaaa	gtttcggatc	attggcatgt
541	aattgtaaaa	ctgggcacgga	gtgaaaagtt	ctcaattgcg	atgtcatttc	taaataaaaa
601	tttatagtgg	tgttcaacct	accaatgttg	accaataacg	ctaaaacaca	agtagaaaat
661	gctacttggt	gggtcaataa	tagtttatct	ctgagaattt	tgggaacattt	gatagaagtg
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781	gcctcgtact	ctttgtcgtt	cacgttgatt	gataatttat	cgccatcgat	attaatgggt
841	acaatagagt	tcttgtatag	gggttttaga	acattagtga	agatttgctt	cttgtccatc
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1261 ggagaatctg cttttgttcc gtcagaattg tcttctcgta gttggaaagt atcatgaatt  
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1381 ttacttagtt aatcatgaac tgtttccaat accatatcag cattcattgg gcgttcttta  
1441 cttacttgta ccgttaacgc attcgagggt aacctgtttt tcgttgtaaca cgatatgcta  
1501 cagaattgtc ttaatatggg ctaagaaaaa aaaaagtctg attatttctg atactgcaaa  
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1621 aattgttttg tgtcataaca gtagtgggtc tttgagacat caatcgactc tcagggtttc  
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2341 agataggata cgtaagtggg ttagaagaca tatattaaag gaagagatcg aaatcctttc  
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10441 ttctacgctc aacctccgt gggcagaaga aatacaaaag ctaatacaat tgtgttagaa  
10501 taaagttcta atattatcta attagtagta ttcattgtac tagtatatta tcacatgata

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12961 tcaatcagag caagagaagt tgaaaatagt gtttcactat tgaactcgga catagcaa  
 13021 ttgagaactc aagtaacaca aaaaaaacgc tccttggtatg aaaatcgttt agagattaag  
 13081 taccataatg acttgataga gaaagaaatt caaccgaaga taactgaact aaagaagaag  
 13141 ctagatgatt tagaaaatac taaagataat ttagtgaaag agaaggaggc tttacaaaat  
 13201 aatatttttca aagaattcac tagtaaaatt ggctttacaa tcaaagaata tgaaaatcat  
 13261 tccggtgaat tgatgagaca acaatctaaa gaattacagc agttacaaaa acaaattttg  
 13321 accgttgaaa ataagttgca gtttgagaca gacagactaa gtactactca aagaagatat  
 13381 gaaaaggcgc aaaaggattt agagaatgct caagttgaaa tgaagtcttt ggaagaacag  
 13441 gaatatgcaa tagaaatgaa aatcggatca atagagtcta aattggaaga acacaaaaat  
 13501 cacttagatg agttacagaa gaaatttgta acgaagcaaa gtgaattaaa tccagcgaa  
 13561 gatattctag aggacatgaa cagcaactta caagtcttaa aaagggaaag agacggtata  
 13621 aaggaagata ttgaaaagtt tgatttagag agagtaacag cgtaaagaa ttgtaaaatt  
 13681 tctaataata atatacctat atcatctgaa acaacgatag atgatttacc aatatcttcc  
 13741 actgataatg aagcaattac aatttccaac agtatcgata taaactataa aggactacct  
 13801 aaaaaataca aaaaaacaa taccgattcg gcaaggaagg agctggagca gaagattcat  
 13861 gaagtggagg aaattattgaa cgagttgcag cccaatgcaa gagctttgga gagatacgac  
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 13981 aagaaaatat taaaccagtt cctaaaaatt aagaaaaaaa gaaaggaact gttcgaaaag  
 14041 acatttgatt atgtgagcga ccatttagac gcaatctaca gggaacttac taaaaatccc  
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 14161 ccgttcaatg cgggaatcaa atatcatgcc actccgcctc taaaagatt caaagacatg  
 14221 gaatatcttt ctgggtggtga aaaaaccgta gctgcattag ctctattatt tgctattaat  
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 14401 gtcatttcat tgaagaacac catgtttgaa aaatctgacg ctctcggttg ggtttacaga  
 14461 cagcaacaag aaaactcgtc gaagatcata actttggact tgagcaatta cgcagaataa  
 14521 tctatgaaac caacctctgc tataaccgct caaataacta ataatatcta tatagggtcaa  
 14581 ctagctagtg caatatcata gtaacaataa tattaataac gtcacttttt tccagggtta  
 14641 acccaattgt ggtgggtggc ggccgaggta tcccttagaa aagaattttt taagttcttt  
 14701 ctcatctctt accagtggag aagtacacga tatttgcaa gtctgtcatc agggcttgat  
 14761 aataaagctg cattagatct tagcaaaaac tagagaaga acattgaata ttgtagctgt  
 14821 atttgcatac ataaacttta tcattgttcg ttagctagct ttgcacatta atttttcgat  
 14881 ttgttaccgc caatgaccgc taacaatgac gatgatata aatcacccat tcccattact  
 14941 aacaagacct tatcccaatt gaagcgcttt gagagaagtc caggaaggcc cagttcttct  
 15001 cagggcgaga taaaacgtaa aaagtctagg ctatatgctg cagacggaag accacattct  
 15061 ccgctaagag caaggtctgc taccccaacg ctacaggacc aaaaactggt caatggcatg  
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15361 caagggtttga tttctatttc cagtaaagat ctggctgatt taaagaaaga agtggatgat  
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 15481 ggtaacgata ttgctgatta tgacgatgcg gaaggcctgg aggacgaatt ggatgaatac  
 15541 ttcgacttag caggccccga ctttaatgct accggaaaaa tcacagctaa atcagctact  
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 15661 gtagctttta gaaagtcgct agcgacagtt tattattatt tgtctcttgt tcagggccaa  
 15721 aagggtgtata gacaaatgca tgtcgatatg ttcgaaagat tagtaagcct tgacgatgat  
 15781 aggacaaatt tcaactgaact gttgcaaaaa caaggtcttt tgctagatca tcaaatcatg  
 15841 ctcaatttcc tgtggaatt tctaccttat ccagatcccg actatgctcg ttatgaatta  
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 16321 ggccatctta gaacagacgg tcaaatatcat tcgtattccc gcacagtga gctttttgtt  
 16381 tatgctataa acggatcaaa aaaagatagg ttttttgaaa aacttgtaag ttttagccaaa  
 16441 gcaatcgaaa catttatcca tccctcta atatgggtttt ggaccaagcc aaatgctaaa  
 16501 ttcgttcacg catttataaa gtcttaccac ggaagggtca aatatgaaga agatatttgt  
 16561 gctaggggcg tcacaaatgg gatatgttta acttcttttt gtcacgaaga gatagttgaa  
 16621 atattcttaa atattatcag tctgggttca cagaataaaa atcctgatat tgcgaactat  
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 16741 gacaaaatac tgatagattt gtacgatacg ctggctgacc aatttatcaa ttcgagacac  
 16801 agaatcattt cctctttgaa acaatttaca agagtaattc ggtttattgt gatggataag  
 16861 ctatatcgcg tgcacataac aaacgtcctt tcgatgctgg tctccaaact tgatatgaac  
 16921 gatactaatt tgacaagcaa cctcatcaac ggtattgtat ctatagccgc tttcattcct  
 16981 atccaagacc tcaactggga ggacgattat atactgttg aatcggtac tcttcttta  
 17041 gttcaacaac atttttatca tattaagtgt ggcgaagt ccaagacctt ccgagttgat  
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 17161 gtatacgtag aaaaaatttt ccaattgggt gatgtagact tagaggactc tttgggtact  
 17221 aaaataaacc aaacaactat gattttacaa gagtctatgg acgataaaat atttaattat  
 17281 tttgcttctt tattacagag aaacttctgg agtaatgact ccttcaagga aaaggatcca  
 17341 aactatgaat tagttactat cccactagcg gctttagtaa gaaggaataa tgggttgagt  
 17401 aaagagtttg tcagaactct tttattccat atcaaagaac aaatcaaaag aggcgccggg  
 17461 tctgtaagaa gtacttcaga gattcaacag agggatgtta agttagtttt atacttaact  
 17521 gcactaaatg atgtcttaag gcaatgtcat gaatctctat tggagtatag cgatgagttg  
 17581 ataacattca tgaaatattt atacgacaac gtcactaacc cgccattgga tgttatcaca  
 17641 tctattgtta ttcacagtgc ttttagcaact ctatgtacaa ccgaaataac tgattgtcgt  
 17701 ctattcccag aggactctaa gattccggaa aaagacagat ggggaggact acagttcgat

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17761 cctcgaagat tctgataaaca gcatttgagt tttcagtggc acgtaccttc tagtgacgag  
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17881 gaactgatga aagctccaag acatgattcc gaatatggcg atatgataca aaaatatggt  
17941 ttagttatga cacatacgct ttccgggtca agtttacttt ttgatccaga ttttaacaaa  
18001 tataaggacgc aatcaaaactt atcatacaga gagaaactga ttttattaaa gaatatacgc  
18061 gaaaataatt gtgaccctca agaactggat attgatattg aacaaattcg ttctggcaag  
18121 gatgatgaag actatattga gagtaaggac attgaagcag ggctgaatgc aggagtttcc  
18181 gatgttgtgc agttaagaga tgagtttccg gatgaattaa ttgttgatga agaagtagtg  
18241 tctgagatgc catctggtgt aaatacccct atcgcgggga cgcattggcac ggacaattca  
18301 gctatgagtt cggatctagc tttcagggat ttagatattt acacctgtaa ttattacttc  
18361 ggaaatacca ctgaggagaa gttacaaaac ccacaatatt tacaagtcca cagagttaga  
18421 gcgcgcattg gatatttctt tcacaaactc tatgtttttt tatctacaaa cttcgaaaac  
18481 aacaccaaca tgttccaaat tctattgcac ggattgaaag tttggttcac agatctggga  
18541 caagaaacgg tcttcaatga agacccaaat gccttcattg acgttgattt cctagaaaac  
18601 gttcaatctc tctcacagt aaatgagccc ttcacgagaa ccaattttgc aatcagagca  
18661 aacagtttgc accagagtag agttctatta cattcaacaa atagaaaagc ttccaagctg  
18721 gaaaacctat tgtagttga catcatacag ttagcgacat ccctttatcc tgatatttat  
18781 aaaccagcac agggaaactt ggtacactgt atgaaacaat tagttgggtc atatggcgta  
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18901 atccaagtta ttttaaatgt tttgttaatt aagaaaatcc ataggaagct tatgacggat  
18961 tataaagaca tcggcagatt gatatttctg cttattgaat gttgtcgtgt gaatgaatta  
19021 gagattggta tgtatgcaga taaaatctta actgacatag tgattgggat caagattcct  
19081 tctagtgtat gtgtcatttc cगतcaagct ttcttacctt tagcacctcc tgatggtact  
19141 attaatttgc aagttgaagc ggtaaagctt gccaaaaaga aaaagcgtga gtactacctc  
19201 tctctgttag tggatttgca ggacaaactt ttagacaaat tagataatga aaaagatatg  
19261 ggggtggaaga taagaatgtt cattttacgt tttgttacac aaatccaatc gaacctcgaa  
19321 agcaaaccgc ataaaagagc agtattttca ataatctccc aaatctccac aaaacatccc  
19381 gaaatcatatc atttggttgt aaagtcattg tctcgcagct gcaacaagat aatatctctc  
19441 tctgactatg aatatgacat caccagggcc tataagaatg aattcaatcc atcatttgtg  
19501 gaaatactgg acacttcgac cacaagcttc cctaaaacgt ttactgaaga aatgaataac  
19561 tttgataacc ccaagtattt tatcgatttg agggcgatg taggggtggt atgttgggga  
19621 aggttatgt acgtcatgtc gccgaaagct ttaaagctca atttacgtga gaatgaactg  
19681 gaagtcctca agacagctgg tcatctattg acaagagaat tcctgagaga tgttacaatg  
19741 aatttagtcc aagataatga aactaggggt gtttttagta gtggtaacgt gtcatttttc  
19801 tcttttagta tctttttgat atcatctggt ttctgcgaac tgaatatgtc ggatctcttt  
19861 gagctatgtg aatcctacta taacaaagac gataaggctt ccatgatcat gtctgtcgag  
19921 atagtggctg gcttagtttg cgggagtaag tttatgtcag tctctgactt ggacaaacgt  
19981 gacactttta tcgaaaactt cctagccaaa tgttttagatt atgattgaa ccatgacgca  
20041 tttgaaattt ggagcacctt ggcattggtg ttgcctgcag tcgttgattt aagaaggtct  
20101 aaaacttttt tttgccattt tatcaacgcc gatggcatgt ttgaccgtga atctgatgca

20161 gccacacatc aaacctccaa aatttacatg ctaagaagta tcttgatgag catggaattt  
 20221 agagccccag atgttggttaa gctatttgat gagttggtat ttgatcacc atacgatcag  
 20281 gttcgccagc tgtcgctaaa ctattgacga ccttagttca aaatcaaagt aatccgtcaa  
 20341 tttcagatcc aaccacatta ttagaagcag aacggaatga tcc

## SEQ ID No. 2

1 mgsfplaeip lrdipvpysy rvsggiassg svtalvtaag thrnsstakt vetedgeedi  
 61 deyqrkraag sgestpersd fkrvkhndhk tlhpvnlgnt gaasvdndgl hnltdisnda  
 121 eklmsvddg saapstlsvn mgvashnvaa pttvnaatit gsdvsnnvns atinnpmeeg  
 181 alplsptass pgtttplakt tktinnnnni adlieskdsi ispeylsdei fsainnnlph  
 241 ayfknllfrl vanmdrsels dlgtlikdnl krdlitslpf eiskifnyl qfediinslg  
 301 vsqnwnkiir kstslwkkll isenfvs pkg fnslnklslq kypklsqgdr lrlsflenif  
 361 ilknwynpkf vpqittlrgh mtsvitclqf ednyvitgad dkmirvydsi nkkfllqlsg  
 421 hdggvwalky ahggilvsgs tdrtrvrwdi kkgccthvfk ghnstvrcl d iveyknikiyi  
 481 vtgsrdntlh vwklpkessv pdhgeehdyp lvfhtpeenp yfvgvlrghm asvrtvsghg  
 541 nivvsgsydn tliwvdaqm kelyilsght driystiydh erkrcisasm dttiriwdle  
 601 niwnngecsy atnsaspcak ilgamytlqg htalvgllrl sdkflvsaaa dgsirgwdan  
 661 dysrkfsyhh tnlsaittfy vsdnilvsgs enqfniynlr sgklvhanil kdadqiwsvn  
 721 fkgktlvaav ekdgsflei ldfskaskin yvsnpvnsss sslesistsl gltrttiip

The human F-box protein h $\beta$ TrCp is encoded by a nucleic acid sequence corresponding to GenBank Accession No. NM\_003939 (SEQ ID No. 3) as shown below, and which encodes the F-box protein corresponding to GenBank Accession No. 4502477 (SEQ ID No.4) as shown below.

## SEQ ID No.3

1 tgcgttggtc gcggcctggc accaaagggg cggccccggc ggagagcgga cccagtggcc  
 61 tcggcgatta tggaccggc cgaggcggtg ctgcaagaga aggcactcaa gtttatgaat  
 121 tcctcagaga gagaagactg taataatggc gaaccccta ggaagataat accagagaag  
 181 aattcactta gacagacata caacagctgt gccagactct gcttaaacca agaaacagta  
 241 tgttttagcaa gcaactgctat gaagactgag aattgtgtgg ccaaaacaaa acttgccaat  
 301 ggcacttcca gtatgattgt gcccaagcaa cggaaactct cagcaagcta tgaaaaggaa  
 361 aaggaactgt gtgtcaaata ctttgagcag tggtcagagt cagatcaagt ggaatttgtg  
 421 gaacatctta tatcccaaat gtgtcattac caacatgggc acataaactc gtatcttaaa  
 481 cctatgttgc agagagattt cataactgct ctgccagctc ggggattgga tcatatcgct  
 541 gagaacattc tgtcatacct ggatgccaaa tcactatgtg ctgctgaact tgtgtgcaag  
 601 gaatggtacc gagtgacctc tgatggcatg ctgtggaaga agcttatcga gagaatggtc  
 661 aggacagatt ctctgtggag aggcctggca gaacgaagag gatggggaca gtatttatct  
 721 aaaaacaaac ctctgacggg gaatgctcct cccaactctt tttatagagc actttatcct

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781 aaaattatac aagacattga gacaatagaa tctaattgga gatgtggaag acatagttta  
841 cagagaattc actgccgaag tgaaacaagc aaaggagttt actgtttaca gtatgatgat  
901 cagaaaatag taagcggcct tcgagacaac acaatcaaga tctgggataa aaacacattg  
961 gaatgcaagc gaattctcac aggccataca ggttcagtcc tctgtctcca gtatgatgag  
1021 agagtgatca taacaggatc atcggattcc acggtcagag tgtgggatgt aaatacaggt  
1081 gaaatgctaa acacgttgat tcaccattgt gaagcagttc tgcacttgcg tttcaataat  
1141 ggcattgatg tgacctgctc caaagatcgt tccattgctg tatgggatat ggcctcccca  
1201 actgacatta ccctccggag ggtgctggtc ggacaccgag ctgctgtcaa tgtttagtag  
1261 tttgatgaca agtacattgt ttctgcatct ggggatagaa ctataaaggt atggaacaca  
1321 agtacttggtg aatttgtaag gaccttaa at ggacacaaac gaggcattgc ctggttgtag  
1381 tacagggaca ggttggtagt gagggtgctc tctgacaaca ctatcagatt atgggacata  
1441 gaatgtggtg catgttttac agtggttagaa ggccatgagg aattggtgag ttgtattcga  
1501 tttgataaca agaggatagt cagtggggcc tatgatggaa aaattaaagt gtgggatcct  
1561 gtggctgctt tggatccccg tgctcctgca gggacactct gtctacggac ccttgtggag  
1621 cattccggaa gagtttttcg actacagttt gatgaattcc agattgtcag tagttcacat  
1681 gatgacacaa tctcatctg ggacttccta aatgatccag ctgccaagc tgaaccccc  
1741 cgttccccct ctcgaacata cacctacatc tccagataaa taaccataca ctgacctcat  
1801 acttgcccag gaccatttaa agttgcggtg tttacgtag ctgccaatac caggatgagc  
1861 aacaacagta acaatcaaac tactgccag tttccctgga ctagccgagg agcagggctt  
1921 tgagactcct gttgggacac agttggtctg cagtcggccc aggacggtct actcagcaca  
1981 actgactgct tcagtgtgct tatcagaaga tgtcttctat caattgtgaa tgattggaac  
2041 ttttaaacct cccctcctct cctcctttca cctctgcacc tagttttttc ccattgggtc  
2101 cagacaaagg tgacttataa atatatttag tgttttgcca gaaaaaaaaa a

#### SEQ ID No. 4

1 mdpaevlqe kalkfmnsse redcnngesp rkiipekns1 rqtynscarl clnqetvcla  
61 stamktencv aktklangts smivpkqrkl sasyekel cvkyfeqwse sdqvefvehl  
121 isqmchyqhg hinsylkpml qrdftalpa rgldhiaeni lsyldakslc aaelvckewy  
181 rvtsgmllwk kliermvrt d slwrglaerr gwgqylfknk ppgnappns fyralypkii  
241 qdietiesnw rcgrhslqri hcrsetskgv yclqyddqki vsgrldntik iwdkntleck  
301 riltghtgsv lclqydervi itgssdstvr vwdvntgeml ntlihhceav lhlrfnngmm  
361 vtcskdrsia vwdmasptdi tlrrvlvghr aavnvdfdd kyivsagdr tikvwnstc  
421 efvrtlnghk rgiacqyrd rlvvsgssdn tirlwdiecg aclrvleghe elvrcirfdn  
481 krivsgaydg kikvdlvaa ldprapagtl clrtlvhsg rvfrlqfdef qivssshddt  
541 iliwdfldp aaqaeprrsp srtytyisr

The yeast F-box protein Grrlp is encoded by a nucleic acid sequence corresponding to GenBank Accession No. M59247 (SEQ ID No. 5) as shown below, and which

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encodes the F-box protein corresponding to GenBank Accession No. AAA34652 (SEQ ID No.6)  
as shown below.

SEQ ID No. 5

1 cacgctaatac atgactcaaa taaatccata aagttttata cagtttttaa aaatatcatc  
61 atctattacc cagatgtgtt aatgaaccat tctatagtca tcattactag gctttcatta  
121 ctactgaggt taccgccta tggaccttcc ttggtaaagg aacttgtttt aaaatttgcc  
181 ttttaacaaa tttagtata tgattatcaa aaaaggcgtg gcaaaatata taacacccaaa  
241 ttttaactgtg cctgtgtgtt actttctttt gtccatactt caccagtttt tcgattttac  
301 acaataattc gttttcattt aatcgttctc ttagaagccc ggtttttgaa tatcaaaatc  
361 gtacttgtgt ccaactagca ggggaagccc aaaattaagg cattgcattt aagcttacac  
421 ctgctgaaa tcttgaaatt tctcattgat ttcggcacia taattatcat tggtagtgag  
481 gctaaacagt ttgctgtttc ctttatacta agaaggctca taatggatca ggataacaac  
541 aaccacaatg acagcaatag gctgcaccca cctgatatac atccaaattt gggccctcaa  
601 ttgtggctga atagtagcgg tgattttgac gacaacaaca acaacaaca caacaacaac  
661 aataataata gcacaagacc acaaagcca tcacgaacta gagaaacggc aacttcggaa  
721 agaaatgcaa gtgaggttag ggatgcaacg ctaaataata tctttaggtt cgatagtatt  
781 caacgggaaa cgcttttgcc aaccaacaac ggacaaccgc taaatcaaaa cttttcgctg  
841 acatttcaac cacaacagca acaaagcgg ctgaacggga ttgacataaa cactgtgaac  
901 acaaactta tgaatggtgt caatgttcaa atagatcaac ttaatcgatt gttaccgaac  
961 ctaccagagg aagaacggaa gcaaatccac gaattcaagc taatagtggg caaaaaaatc  
1021 caagagtttc tggttgttat agagaaacgt agaaaaaaaa tactgaacga aattgagcta  
1081 gacaacctta aactaaagga gctacgtatt gataactccc cacaagcaat tagttatttg  
1141 cataaattac aaagaatgag gcttagggcg ctagagacag aaaacatgga aattagaaat  
1201 ttaaggctaa aaatattaac aattatagaa gagtacaaaa agtcattata tgcatactgc  
1261 cattccaagc taagaggtca acaagtggaa aatccaacag ataatttcat catttgata  
1321 aactccatag atactactga atcatctgac ttgaaagaag ggctacaaga tctttcgaga  
1381 tattcaaggc agttcataaa taatgtggtt tcgaatccat caaatcaaaa catatgtacg  
1441 agtgtcacc gaagatcacc tgtgtttgac ctaaactatgc taccctcgga aatattacac  
1501 ttaatattag ataaacttaa ccaaaaatat gatattgtaa aattccttac cgtttccaaa  
1561 ctctgggctg aaataattgt gaagatactt tattacagac cgcacatcaa caaaaagagt  
1621 caattagact tgtttttaag gactatgaag ttaacttctg aagaaactgt attcaactat  
1681 cgtttaatga tcaaaagatt aaatttttca ttgtgtggtg actacatgca cgatacagag  
1741 cttaactatt ttgtcggatg taagaatttg gacgactaa ctttagtatt ttgcaagcat  
1801 ataaccagtg ttccaatatc ggctgttttg agaggtgta aatttctcca aagtgtggat  
1861 atcactggaa taagagacgt ttccgatgac gtatttgata ccttagcgac atattgtccc  
1921 agagtacagg gcttttatgt tccataggca aggaatgtaa cattcgattc actgcggaat  
1981 ttcatagtcc attccccgat gttgaaaaga ataaaaatca cagcaacaaa taacatgaat  
2041 gacgaattag tagaactatt agccaacaaa tgcctttgct ttgtagaggt cgatataaca  
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2161 aggggaattca gaataactca taatacgaat attacggata atcttttcca ggagctttct  
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2281 acagataaaa ctatagaaaag tatagtcaat ttagccccta aattacgtaa tgtttttcta  
2341 ggcaagtgtg gccgaattac agatgcatcg ttgttccaat tatcgaagct gggcaaaaac  
2401 ttgcaaacag tgcatttttg gcaactgtttc aatataactg ataacggggt aagagcactc  
2461 tttcattcat gtacaagaat acagtatgtg gactttgcgt gctgtacgaa ttttaaccaat  
2521 agaactcttt atgaactagc agacttacca aaattaaaga gaattggcct tgtcaaagt  
2581 acgcaaatga ctgacgaggg tttgttgaat atggtttcct tgcgaggcgc aaatgatact  
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2701 ctaattgtctt gcccaaggct ctacacattg tctttgactg ctgttcgcgc atttttacgc  
2761 cccgatataa cgatgtattg caggcctgca cctcagact ttagtgaaaa tcaacgtcaa  
2821 atattctggg tattttcagg gaaagggtgt cataaacttc gccattattt agtaaattta  
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2941 tccaagaatt tgatatttaa cggtgaaaca cttgaagatg ctcttaggag aatcataact  
3001 gattttaaate aagattccgc tgcaattata gctgctacag gattaaatca aatcaacggg  
3061 ctaaataacg attttctttt ccagaatatc aattttgaac gaatagatga agtattcagt  
3121 tggatatctca atacttttga tggcattagg atgagctcgc aggaagttaa ctactatta  
3181 ttgcaagtaa acaagacgtt ttgtgaagat ccatttagtg atgtggacga tgatcaagat  
3241 tatgtcgtag cacctggtgt aaaccgggaa attaacagtg aaatgtgtca tattgttaga  
3301 aaattccatg agttaaatga tcatattgat gatttcgagg tgaatgttgc tagtttggtg  
3361 agagtccagt ttcagtttac tggtttttta cttcatgaaa tgactcaaac ctatatgcaa  
3421 atgattgaat taaacagaca aatttgttta gtacaaaaaa cggttcagga atcgggcaac  
3481 atagattacc aaaaagggtt tttaatatgg cgacttttat tcattgacaa attcattatg  
3541 gtggttcaga agtacaagct ctccaccgtt gttttgagac tatattttaa agataacata  
3601 acattgttaa ccagacaaag agaactatta atagcccacc aaagatcagc atggaataac  
3661 aataatgaca atgacgcaa cgggaacgac aacaacatag tgaatattgt atcggatgct  
3721 ggggcaaacg atacaagtaa caatgaaact aacaatggta atgatgacaa tgaaacagaa  
3781 aatccaaatt tctggcgta gtttggaat agaattgcaa tatcacctga ccagatgagg  
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4081 ctttttgctt tagcatgtat acgctataga cttgcggtat caacgaatat acgtaacggt  
4141 gtcacgtcca cagaagatgc tatgtcaaca gttccctgca gatattctgc atgaggcgaa  
4201 acattctata cacagtttca aaactacaaa aaatacaaac ctttagcctg tttatcaaat  
4261 tagttagcta taaaatgccc attttcttag caatatcgat caattgattg tcatcttcca  
4321 aagtttcaat aaaatttgtg gcagtatagt aatcccttct caatatgtcc aatttcttat  
4381 cacagtcac tataaattcg cgcttaatag attgcacttt taggttacc caattgttga  
4441 atgtcatgat ccaactcttc tgcaggattt

SEQ ID No. 6

1 mdqdnnnhnd snrlhppdih pnlgpqlwln ssgdfddnnn nnnnnnnnns trpqmpsrtr  
61 etatsernas evrdatlnni frfdsiqret llptnnggpl nqnfsltfqp qqqtналngi  
121 dihtvntnlm ngvqvqidql nrllpnlpee erkqihefkl ivgkkiqefl vviekrrkki  
181 lneleldnlk lkelridnsp qaisylhklq rmrlralete nmeirnlrlk iltiieeykk  
241 slyaychskl rgqqvenptd nfiiwinsid ttesdldkeg lqdlrsysrq finnvlsnps  
301 ngnictsvtr rspvfalnm1 pseilhlild klnqkydivk fltvsklwae iivkilyyrrp  
361 hinkksqldl flrtmkltse etvfnyrlmi krlnfsfvgd ymhdteinyf vgcknlerlt  
421 lvfckhltsv pisavlrgek flqsvditgi rdvsddvfdt latycprvqg fyvpqarnvt  
481 fdslrnfiyh spmlkrikit annnmndelv ellankcp11 vevditlspn vtdssllkl1  
541 trlvqlrefr ithntnitdn lfqelskvvd dmpslrlidl sgcentdkt iesivnlapk  
601 lrvnflgkcs ritdaslfql sklgknlqtv hfghcfnitd ngvralfhsc triqyvdfac  
661 ctlnltnrtly eladlpklkr iglvkctqmt degllnmvsl rgrndtlerv hlsycsnlti  
721 ypiyellmsc palshls1ta vpsflrpdit mycrpapsdf senqrqifcv fsgkgvghkr  
781 hylvnltspa fgphvdvndv ltkyirsknl ifngetleda lrriitdlng dsaaiaaatg  
841 lnqinglnnd flfqninfer idevfwyln tfdgirmsse evnslllqvn ktfcddpfsd  
901 vdddqdyvva pgvnreinse mchivrkfhe lndhiddfev nvaslvrvqf qftgflhem  
961 tqtymqmiel nrqiclvqkt vqesgnidyq kglliwrl1f idkfimvvqk yklstvvrl1  
1021 ylkdnitllt rqrrelliahq rsawnnnndn danrnanniv nivsdagand tsnnetnngn  
1081 ddnetenpnf wrqfgnrmqi spdqmrnlqm glrnqnmvrn nnnntidesm ptdaidsqmd  
1141 easgtpdedm 1

The yeast F-box protein Met30p is encoded by a nucleic acid sequence corresponding to nucleotides 3742 to 5664 of GenBank Accession Nos. Z46861 and Z47047 (SEQ ID No. 7) as shown below, and which encodes the F-box protein corresponding to GenBank Accession No. CAA86905 (SEQ ID No.8) as shown below.

SEQ ID No. 7

1 tttcttggtg cttcaacgga ttatcttaaa aaaatctatc atattttcaaa atataaatc  
61 ttattttttac aaagaagata tagattatgc ataataattat tttgtttacat tttttttctt  
121 ttactttttta ttttcttttc tttgtacttc ctcaaataag catcttttagc aggttaacaa  
181 tagcaaatat catgtccagc ccaaatacaca taatactttc cacttcaactt tcactatctg  
241 tttcgggaga cctatcatcc acggtattga cagtggtct tggaaatca gttgcatgtg  
301 cccaaggaat ggatctcgaa atgttctcaa acacggagga ccttcttctg aaagtccac  
361 ggtaagcggg cataggttcg gcaaaactgt gaggattatt gtcatgtgaa ggcgtgatag  
421 gtatgtcggt aagtgatgaa aaggcttttg aacccaaatc actactatcc atagaatcat  
481 caccgacctg cgcaattgga taaggcagag gagcgtcact ggtaaccctg aataggtgaa  
541 cattggcaac atgttcattt tcgactctga agatgatcca aacgaatctt cttaaaacct

601 ccaaaagggc caatataaac gacgtcacag cactctgctg aattgtttga ggagcaattg  
661 cgtatacaat ccactcaaat ctaatgagga tatcccaaat catagcaaag taataaacta  
721 acttctact gaatgaataa ctgccgtttt cccaattttt tttaccagct aaatacaagt  
781 cgtctcttag caaccaattg taagaagtag tattgtgagc aaaggaccaa tccataacta  
841 aatcccaggc ggaagtaagg atcgaattca acgtagcgca cacgataaaa ggggttctcc  
901 tttgttcaga acggtctgac aatctgtaag cacaaagtgt ggcattatac gctataccca  
961 aagtgtattt cgccgcgttc aaaagatgag ggaaccaatc accggaatca gcaaattctc  
1021 gtaaacattg catgaatctc caataacttg gtaaacatga taaaacaccc attgctctgg  
1081 aatgtgaaga gccacataga ttgttggcg tatgagagta aacacagaag aacatggcaa  
1141 tatcggaat agaatacgtc aacgaacaaa taatatctcc caaaaagaaa tcaccaaact  
1201 caacagggaa aaaaccagac atcatcagtc taataagagt aaccaccagc cttttctag  
1261 tgtgtacaac tttgtcccaa tatggaatta gaccagaggg acataaaaat aagaaagaca  
1321 caataccaat atataaaaag cctaagggtg tgagcttctc caaagcgaaa cttaacatgg  
1381 aacagaccgc acaaggact atgaagaatg tcaagaaata caacttgagc ggaattttac  
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1561 acgcgatcaa caaaaccatg taccaaccac cccacagtgg gaacagaatc ttgtgcgtaa  
1621 atgacgtttc ttcagagcta atgcccaaat acaaagtgt agtgatcaaa gtcattgaca  
1681 cacctatgcc cagcccgaca accagcatct gcacaatcga tctgtgtgtt ctatgaacca  
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1861 aagtgatggg ctctttgtct ctttggggg aagagagctc cgaagtgggt gttggttgcg  
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27121 cagaacaaaa gtggcgggta taacacgaag aaagaaggaa ggggtggtgat tgggtgcttt  
27181 gtttttttcc gctcgtcgtg gtggcatgcg cttttttttt cttgggtgaa gattagccgc  
27241 cgaagtcgta tgctcctctt ttgagcggtt tgaaagatag aaaaaagctg agtaagtaaa  
27301 atcgtcggcg gctaattcga aaagtatata aagtccttta tttttccac tcgtattctt  
27361 ttccctcctc cttttttttt ttactttctc acgtatggct tgtttcattt attatcagat  
27421 cagtaatcac gtgccgtgct gttagaaatg acatttggtt ctttgccttc tttgtccttt  
27481 ttctatcttc ctactaagag aaactattat acaatacaat aagagaacat cgtgaaacaa  
27541 cataaaagat atcacgtcat cagagagaga taaaacatca caaccaatta cattacagtg  
27601 tattcgtttc ttcttagaga gagaaataaa gagcgggata aaaggacact acacagtata  
27661 ccccataccc aggtgcaata atacacgtat atctatggtt attgcacatc aaacccaca  
27721 tatatgtctg ccagaaaacg caagtttaat agtctcaaac cgctagacac cttgaacagc  
27781 tctcgtgcca gctctccaag gtcctctgct tctctaccgc caaaagata taacactttt  
27841 cgtaaggatc cgaaaatcgt tgatcatcta aacaatgctt ctacaaagga tttcttacca  
27901 gttttgagta tgaacagcga gagtaagagg cagatcgaat tgtcggataa tgatggtgat  
27961 aataatgatg aaggtgaagg cgtcaacagt ggctgttcag atcaagattt tgaacctttg  
28021 caaagctctc ctttgaaaag acactcatca ctcaaaagca cttccaatgg tcttttggtc  
28081 caaatgtcta ataactctgg gaattggttca ccggaaccgg cagtagcgag cacttctcca  
28141 aatggctcaa ttatttccac taaactaaat ttgaacggcc aattttcttg cgttgattcg  
28201 aaaacattgc gaatttatcg gcataaagca ccattgcataa tgacttttgt ctcagatcat  
28261 aatcatccga aattttcatt gtattttcaa caatcgggtga tctacaattc acaagttaat  
28321 ctgcttgatg atgttgaatt gataatttta gataagaaga actcttttat ggctataatt  
28381 ttaaaagatc tgaaaaaggt caagatgata ctgacgtga ataactcttc aatcaacatt  
28441 aacacgaaca tcttgatatg gtccactgca agctccgctt caaataaaaa aataaagtct  
28501 attaaaagat tctgttgatg gtcataattc tcgtcgataa aagtcgaaat tttagatcat  
28561 aaagagcaga ttttggaag actaaaacat ctgattcatc ctatttcttc gtcatcacct  
28621 tcattgaaca tggaaagggc aataaactcc actaaaaatg cattcgactc ttttaagactt  
28681 aaaaaaacta aactttctac taatgatgat gaaagtcgcg aaattcatac tcatttctta  
28741 tcaaacaaac ctcatgggtt gcaatcctta acaaaaagga ctcgatttgc cagccttggg  
28801 aaaaaagagc attcaatatc tgttccaaa tcgaatattt caccctcaga tttctacaac  
28861 actaacggga cagaaacttt acaatcccac gcagtttcac aactaagacg ttcaaataga  
28921 tttaaagatg tttcggatcc agcaaactca aattcaaatt cagaatttga tgatgcaact  
28981 acggaatttg aaacaccaga actgttttaa cctagcctct gttacaaatt caacgatggt  
29041 tcaagctata ctataacaaa tcaagatttc aagtgtcttt tcaataagga ttgggttaat  
29101 gatagcattt tggatttttt tacaaaattt tacattgaat catctattga aaagtcaatt  
29161 atcaaaagag agcaagttca cttaatgtcc tctttttttt acacgaaact aattagtaat  
29221 ccagcagatt attattctaa tgtaaaaaag tgggttaaca atactgattt gttttctaaa  
29281 aagtacgttg ttataccaat taacataagt tatcattggt ttagttgcat tataacaaac  
29341 ttggatgcga tcttggaatt tcataaaaac aaagataaaa acgatgccat caactccgat







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61 mtmatrspss spdlatndsg trvqplpeyn ftkfcyrhnp diqfspthta cykqdlkrtq
121 einaniaklp lqegsdihhi iskysnsndk irklildgil stscfpqlsy isslvthmik
181 idfisilpge lslkilayld cqslcnatr crkwqkladd drvwyhmceq hidrkcpcng
241 wglpllhmk ariqqnstgs ssnadiqtqt trpwkvire rfkvesnwrk ghcriqefkg
301 hmdgvltlqf nyrlldtgsy dstigiwdlf tgklirrlsg hsdgvktlyf ddrklitgsl
361 dktirvwnyi tgecistyrh hsdsvlsvds yqkvivsgsa dktvkvwhve srtcytlrgh
421 tewvncvklh pksfscfscs ddtfirmwdi rtncslkvfr ghvgqvqkii pltikdvenl
481 atdntsdgss pqddptmtog adesdtpsne qetvldenip ypthllscgl dntiklwdvk
541 tgkcirtqfg hvegwdiaa dnfriisgsh dgsikvwdlq sgkcmhtfng rrlqretght
601 qtqslgdkva piacvcigde ecfsgdefgc vkmykfdlnd

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The fission yeast F-box protein Pop2 encodes a novel F-box/WD-repeat protein involved in the proteolysis of the Cdc2p inhibitor Rum1p and the replication initiator Cdc18p and is encoded by a nucleic acid sequence corresponding to GenBank Accession No. AF038867 (SEQ ID No. 9) as shown below, and which encodes the F-box protein corresponding to GenBank Accession No. AAB95480 (SEQ ID No.10) as shown below.

SEQ ID No.9

1	atgtcactct	ctaggtgtcc	aactgacaat	tcgtcctccc	gtataaaattc	ctctgttctct
61	ttaataaaata	gcagcagccc	tgctacacct	ccagaatcat	ttgatcctca	agtatttctct
121	tctttcactta	ttcatgggga	taacctgctt	cctcaagatg	atcaaattgc	atcggatcct
181	cgctcagaat	caaatagttg	taatggcaat	acgagttctt	ccctgccgtg	cactgattcg
241	tatcagtacc	cattaaagca	ttcttgtacg	ccttcttttc	ttcgaaagtt	taatgaaagt
301	atagagaatg	tctcttataa	atgcttagac	cactcacccg	cagatagtgt	tcttggcgat
361	ttttccattt	cccttggttc	tcaaaggaat	ttctatatatt	ctcattcttc	tcttccacct
421	aaaattatat	caattgatag	aaacaatcga	attaagttag	ataatagcat	ttcatctaac
481	tccgacaatt	tccctccttc	tccgaaagtc	gacacatcaa	acactgtttc	acctggtagt
541	aaacctatct	ctgaggatct	tgaagattta	aacttacagt	caattgttca	aacttttgag
601	gatcttccag	aaggaattca	atcttatgcg	ttttttcaac	tactccgttc	gtgcaatcgg
661	caatcgatgc	gtttattatt	gaatgaatgc	gagccgcttc	taaaaaaaaga	tatactttca
721	aatcttccct	tttccattgt	tcagttctata	ttattaaatc	tggatataca	ttcttttctt
781	tcttgccgtc	ttgtttcgcc	tacttgggaat	agaatacttg	atgtgcatac	ttcatactgg
841	aaacacatgt	ttagtgttatt	tggcttttcaa	atcaatgaaa	atgactggaa	atatgtctaatt
901	ccaaacttaa	atcgctccacc	ttttttgcac	aacgacccaaa	tctcagatga	ctatttttccg
961	gaaatttttca	aaagacattt	tctcaataga	aaacgatggg	tattttccttc	gataacctcca
1021	agtcactctat	cttttcccat	tcagtgttcca	aacttttatga	taacttctttt	actacttcat
1081	aaagacagaa	taatcaccac	ttcgggatct	ggaacaattc	aaattcataa	tgctattacc
1141	ggtgttttag	aagctcgatt	agagggtcat	aaagaagggtg	tttgggctgt	caaaatacat

1201 gagaatacac ttgtatctgg ttcatcgat aaaactgttc gcgtttggaa catagagaaa  
 1261 gctaaatgta cgcacatatt taggggacat atttccatca tcagatgctt agagatctta  
 1321 gttccgagtc gtcttattcg ccatggagtt gaaattgttg aaccagatca accgtacatt  
 1381 gtcagcggct ctgggatca tacacttcgg gtttgggaagc ttccaaaaaa cacggatcct  
 1441 ccttatcttc cagataatac aaactctatt gaccgttggg agaagaacct gtattttgta  
 1501 cataactttga taggacatac agactctgta cgaactatat ccggctatgg tgatatactt  
 1561 gtgagtggga gttatgattc ttcaattcgc atttggagag tttcaacagg ggaatgtctt  
 1621 taccatctgc ggggtcatag tcttcgtata tatagtgttt tatatgaacc agaaaggaat  
 1681 atttgcataa gcggttagcat ggataagtc attagggttt gggatttatt gacagggact  
 1741 tgtaaatatg tgcttgaagg ccatgatgcc tttgttacgc ttcttaattgt attccagaat  
 1801 aggttgatat caggttctgc tgactccaca attagaatat gggatttgaa tactgggaaa  
 1861 ccattaatgg ttttgccgtc taattcaggc tacattagta gctttgtgtc agatgaacac  
 1921 aaaattatta gtggaatga tggttctgta aagttatggg atgttaggac tggaaagctg  
 1981 ttacgttttc tattaacaga cctcacaaaa atatggcatg tcgattttga tgctatgcgt  
 2041 tgtgtggctg cagtgcagcg tgatgatcaa gcatatttgg aagttattaa tttttccgga  
 2101 tcaagaccgt ag

#### SEQ ID No.10

1 mslsrcptdn sssrinssvp linssspatp pesfdpqvfp sslihgdnl1 pqddqiasdp  
 61 rsesnscngn tssslpctds yqyplkhsct psflrkfnes ienvsykcld hspdpvpgd  
 121 fsislvpqrn flyshsslpp klisidrnrr ikldnsissn sdnfppspkv dtsntvspgs  
 181 kpisedledl nlqsisvtfe dlpegiqsyf ffqlrscnr qsmrlllnec epllkddils  
 241 nlpfsivqsi llndihsfl sclvsptwn rildvhtsyw khmfsllfgfq inendwkyan  
 301 pnlrppflh ndqisddyfp eifkrhflnr krwlfpispp shlsfpihvp nfmitslllh  
 361 kdriittsgs gtiqihnait gvlearlegh kegvwavkih entlvsgsid ktvrwniek  
 421 akcthifrgh isiircleil vpsrlirhgv eivepdqpyi vsgsrhdhtr vwklpkntdp  
 481 pylpdntnsi drweknpyfv htlightdsv rtisgygdil vsgsydssir iwrvtstgecl  
 541 yhlrghslri ysvlyepern icisgsmaks irvwdlstgt ckyvleghda fvtllnvfqh  
 601 rlisgsadst iriwdlntgk plmvlpnsng yissfvsdeh kiisgndgsv klwdvrtgkl  
 661 lrflldltk iwhvdfdamr cvaavgrddq aylevinfsq srp

The murine F-box protein FWD1p involved in ubiquitin-dependent degradation of IkappaBalpha and is encoded by a nucleic acid sequence corresponding to GenBank Accession No. AF081887 (SEQ ID No. 11) as shown below, and which encodes the F-box protein corresponding to GenBank Accession No. AAD17755 (SEQ ID No.12) as shown below.

#### SEQ ID No. 11

1 gaattcggca cgaggcggag ctgcgttggc tgcggcctgg cacgaaaggg gcggccccgg  
 61 cggagagcag acccagtagt ccgggcgatc atggaccggc cagaggcggt gctgcaggag

Sub  
A1  
cont

366025.1

Sub  
AI  
Cont

121 aaagcgctta agtttatgaa ttcctcagag agagaagact gtaataatgg cgaacccccct  
181 aggaagataa taccagagaa gaattcactt agacagactt acaacagctg tgccaggctt  
241 tgcataaacc aagagacagt atgtctaaca agcactgcta tgaagactga aaattgtgtg  
301 gccaaagcca aacttgccaa tggcacttcc agcatgattg tgcccaagca gcggaactc  
361 tcagcaagct atgagaagga aaaggagctg tgtgtcaagt attttgagca gtggtcagag  
421 tctgatcaag tggaatttgt agaacacctt atatcccaaa tgtgtcacta ccagcatggg  
481 cacatcaact cctacctaaa acctatgctg cagagggatt tcataactgc actgccagca  
541 cgggggtctgg accacatcgc tgagaacatt ctgtcatact tggacgccaa gtcactgtgt  
601 gctgctgagc tcgtgtgcaa ggaatggtac cgcgtgacgt cggacggcat gctgtggaaa  
661 aagctcatcg agaggatggt caggacggac tctctgtggc gaggcctggc agagcgcaga  
721 ggctggggac agtacttatt caaaaacaaa cctcctgatg agaacgctcc tcccaactcc  
781 ttttatagag cgctttatcc taaaatcata caagacattg agacaataga gtccaattgg  
841 agatgtgggc gacatagttt acagagaatc cactgccgga gtgaaacaag taaaggggtt  
901 tactgtttac agtacgacga ccagaagata gtcagcggcc ttcgagacaa caccatcaag  
961 atctgggata aaagcacact ggaatgcaag cggattctca cgggccacac gggctccgtc  
1021 ctgtgtctgc agtacgatga gagggtgatc atcacaggct cctcagactc caccgtcaga  
1081 gtgtgggatg taaatgcagg tgagatgcta aacacattga ttcaccactg tgaagccgtt  
1141 ctgcacctgc gcttcaataa tggcatgatg gtgacctgtt ccaaagaccg ttccatcgct  
1201 gtgtgggata tggcttcccc aactgacatc accctcagga ggggtgctggt gggacaccga  
1261 gctgcggtca atgtttaga ctttgatgac aagtacatcg tttctgcctc tggagataga  
1321 accataaagg tgtggaacac aagtacctgt gaattcgtaa ggaccctaaa tgggcacaag  
1381 cgtggcatcg cctgtttgca gtacagagac aggctggtgg tgagcggctc ctctgacaac  
1441 accatcaggc tgtgggacat agagtgtgga gcatgcctgc gagtgttgga gggccatgag  
1501 gagtgtgtac gctgcattcg atttgataac aaaaggatag tgagcggagc ctatgatggg  
1561 aaaattaaag tgtgggatct tatggctgct ttggaccgcg gtgctccagc agggactctc  
1621 tgtctgcgga cacttgtgga gcattctgga agagtcttcc gcctccagtt tgatgaattc  
1681 cagattgtca gtagttcaca tgatgacaca attctcatct gggacttccct gaatgatcca  
1741 gctgctcacg ctgaaccgcc ccgtccctc tctcggacat acacctacat ctccagataa  
1801 ataaccaac actggcctca taattgcca ggattcgta atgttgagc atttaacaga  
1861 cctgccaaaga ccaggatgaa caacaatcaa actcctacc ggattcccg acggatgagc  
1921 gaggagcagg gctttgagac tcctgttggg acacagtcgg tcagcagccg accaggacgg  
1981 cctgctcggc accggctgcc tcagtgtgc tatcagaaga tgtctttatc ttgtgtgaat  
2041 gattggaact tccaagcctc cctccccctc cctccccct cctccctgca cctgtttccc  
2101 tcccatggg ttccagacaa agatgactta taaatatatt tagtgttttg cctaaaaaaaa  
2161 aaaaaaaaaa aaaaa

SEQ ID No. 12

1 mdpaeavlqe kalkfmnsse redcnngpp rkiipekns1 rqtynscarl cingetvclt  
61 stamktencv akaklangts smivpkqrkl sasyekekel cvkyfeqwse sdqvefvehl

121 isqmchyqhg hnsylkpm1 qrdfitalpa rgldhiaeni lsyldakslc aaelvckewy  
 181 rvtsdgmlwk kliermvrt d slwrglaerr gwgqylfknk ppdenappns fyralypkii  
 241 qdietiesnw rcgrhslqri hcrsetskgv yclqyddqki vsglrdntik iwdkstleck  
 301 riltghtgsv lclqydervi itgssdstvr vwdvnageml ntlihhceav lhlrfnngmm  
 361 vtcskdrsia vwdmasptdi tlrrvlvghr aavnvdfdd kyivsasgdr tikvwtstc  
 421 efvrtlnghk rgiacloyrd rlvsgssdn tirlwdiecg aclrvleghe elvrcirfdn  
 481 krivsgaydg kikvwdlmaa ldprapagtl clrtlvhsg rvfrlqfdef qivssshddt  
 541 iliwdflndp aahaepptsp srtytyisr

Sub  
a  
cont

Other exemplary polypeptides and nucleic acids for use in the invention include:

Exemplary SCF subunit-encoding genes and their encoded polypeptides include Skp1p (GenBank Accession No.U61764) which encodes Skp1p (GenBank Accession No. AAC49492); and the murine SCF complex protein cul-1 (encoded by the nucleic acid of GenBank Accession No.AF083216 which encodes the cul-1 polypeptide of GenBank Accession No. AAD16038).

### Equivalents

Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents of the specific embodiments of the invention described herein. Such equivalents are intended to be encompassed by the following claims.